



COLLEGE OF
THE ROCKIES

ASSOCIATE OF SCIENCE

**PROGRAM PLANNING GUIDE
2022/2023**

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ASSOCIATE OF SCIENCE

An Associate of Science (ASc) Degree provides students with the first two year of study towards a Bachelor of Science degree.

In the ASc, degree program, students complete 20 courses providing both breadth of knowledge and in-depth study in specific disciplines.

Since many students will continue their studies, the requirements are sufficiently flexible to enable students to complete the required prerequisites for upper level coursework in their intended major.

This guide was developed to help students choose courses and to develop a sequencing plan for transfer to a Bachelor of Science degree program.

DISCLAIMER

This document is provided for information only.

Students should always consult the course calendar of the degree-granting institution to ensure that they have taken appropriate prerequisites.

COTR Education advisors are available for further assistance.

For current course transfer agreements between COTR and BC institutions
please consult bctransferguide.ca

For transfer to AB institutions
please consult transferalberta.alberta.ca/transfer-alberta-search

For University of Lethbridge transfer agreements
please consult bridge.uleth.ca/PROD/uofl_ro_tc_agrmnts.front_end

Sequencing plans are samples.

Students may need to modify plans based on prerequisite requirements or course scheduling and availability.

Associate of Science Checklist

Biology, Chemistry, & Biochemistry majors

36 credits in SCIENCE

at least 3 credits in laboratory science,
15 credits other science courses and at least
18 credits in 200 level in 2 or more areas

- _____ 1. Biology 101 - *Intro to Biology 1*
- _____ 2. Biology 102 - *Intro to Biology 2*
- _____ 3. Biology 200 - *Intro to Microbiology*
- _____ 4. Biology 201 - *Cell Biology*
- _____ 5. Biology 202 - *Introduction to Biochemistry*
- _____ 6. Biology 203 - *Genetics*
- _____ 7. Biology 204 - *Intro to Ecology*
- _____ 8. Biology 208 - *Vertebrate Biology*
- _____ 9. Chemistry 101 - *Fundamentals of Chemistry 1*
- _____ 10. Chemistry 102 - *Fundamentals of Chemistry 2*
- _____ 11. Chemistry 201 - *Organic Chemistry 1*
- _____ 12. Chemistry 202 - *Organic Chemistry 2*
- _____ 13. Chemistry 215 - *Analytical Chemistry*

	U of L BSc. Biological Science	U of L BSc. Biochemistry	U of L BSc. Chemistry	UVic BSc. Biology	UVic BSc. Biochemistry	UVic BSc. Chemistry	UBC BSc Biology	UBC B Sc. Biochemistry	UBC B Sc. Chemistry	UNBC BSc Biology	UNBC B Sc. Biochemistry	UNBC B Sc. Chemistry
X	X	X	X	X	X	X	X	X	R	X	X	X
X	X	X	X	X	X	X	X	X	R	X	X	X
X	X			X		X*				X	X	
X	X	X	X	X	X	X	X	X	R	X	X	X
X	X	X	X	X	X	X		X	R	X	X	X
X	X		X	X		X	X			X	X	
X			X			X				X		
R						X*				X		
X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X	X
	X	X				X		X	X			X

6 credits in ENGLISH

- _____ 1. English 100 - *English Composition*
- _____ 2. English 101 - *Intro to Poetry & Drama*
- _____ 3. English 102 - *Intro to Prose Fiction*

X	X	X	X	X	X	X	X	X	X	X	X	X

6 Credits in MATH (at least 3 credits in Calculus)

- _____ 1. Math 103 - *Differential Calculus*
- _____ 2. Math 104 - *Integral Calculus*
- _____ 3. Math 101 - *Finite Mathematics 1*
- _____ 4. Math 102 - *Finite Mathematics 2*
- _____ 5. Math 201 - *Multivariable Calculus*
- _____ 6. Math 106 - *Statistics*

X	X	X	X	X	X	X	X	X	X	X	X	X
	X	X	X	X	X	X	X	X	X	X	X	X
		X										
		X										
					X		X	X				
R			X	X	X	R			X			

6 Credits in ARTS (other than English)

- _____ 1. Elective
- _____ 2. Elective

X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X	X

6 credits in ARTS, SCIENCE, or OTHER AREAS

- _____ 1. Physics 103 - *Intro to Physics 1*
- _____ 2. Physics 104 - *Intro to Physics 2*
- _____ 3. Computing 105 - *Intro to C and C++*
- _____ 4. Math 221 - *Linear Algebra*

X	X	X	X	X	X				X		X	X
	X	X	X	X	X						X	X
												X
												X

NOTE: the above listed are EXAMPLE INSTITUTIONS
Consult bctransferguide.ca for transfer to these and other institutions

* - indicates that there is more than one option.

ex. English 101 or 102 will help fulfill the English requirement, but English 100 is required.

R - indicates recommended elective

x¹ - indicates non-specific credit granted

Physical Geography & Environmental Science majors

36 credits in SCIENCE

at least 3 credits in laboratory science, 15 credits other science courses and at least 18 credits in 200 level in 2 or more areas

- _____ 1. Biology 101 - *Intro to Biology 1*
- _____ 2. Biology 102 - *Intro to Biology 2*
- _____ 3. Biology 200 - *Intro to Microbiology*
- _____ 4. Biology 204 - *Intro to Ecology*
- _____ 5. Biology 208 - *Vertebrate biology*
- _____ 6. ENSC 101 - *Intro to Environmental Science*
- _____ 7. ENST 200 - *Intro to Enviro. Sustainability*
- _____ 8. Geography 101 - *Physical Geography*
- _____ 9. Geography 105 - *Intro to Geology*
- _____ 10. Geography 106 - *Physical & Historical Geology*
- _____ 11. Geography 210 - *Geography of BC*
- _____ 12. Geography 220 - *Envrio Geo & Nat .Hazards*
- _____ 13. Geography 230 - *Meteorol, Climatol & Hydrol*
- _____ 14. Chemistry 101 - *Fundamentals of Chemistry 1*
- _____ 15. Chemistry 102 - *Fundamentals of Chemistry 2*

	U of L BSc. Geography	U of L BSc. Environmental Science	UVic BSc. Geography	UBC BSc Geography	UBCO BA Geography	UNBC BSc Geography	UNBC BSc. Environmental Science
	x*	x	R	x			x
		x	R	x			x
		x					x
		x					
	R	x	R	x			x
	x	x	x	x	x	x	x
	R		R		x	x	x
	x	x			x	x ¹	
	R		x	x ¹	x	x	x
	R		R	x ¹	x	x ¹	
	x*	x		x		x	x
		x		x		x	x

6 credits in ENGLISH

- _____ 1. English 101 - *English Composition*
- _____ 2. English 102 - *Intro to Poetry & Drama*
- _____ 3. English 103 - *Intro to Prose Fiction*

	x	x	x	x	x	x	x
	x*	x*	x*	x*	x*	x*	x*
	x*	x*	x*	x*	x*	x*	x*

6 credits in MATH (at least 3 credits in Calculus)

- _____ 1. Math 101 - *Finite Mathematics 1*
- _____ 2. Math 102 - *Finite Mathematics 2*
- _____ 3. Math 103 - *Differential Calculus*
- _____ 4. Math 104 - *Integral Calculus*
- _____ 5. Statistics 106 - *Statistics*

	x	x	x	x	x	x	x
				x			
	R	x	R			x	x

6 credits in ARTS (other than English)

- _____ 1. Anthropology 102 - *Intro to Arch/Phys Anth*
- _____ 2. Elective

	x						
	x	x	x	x	x	x	x

6 credits in ARTS, SCIENCE, or OTHER AREAS

- _____ 1. Biology 151 - *Biology of the Environment*
- _____ 2. Chemistry 201 - *Organic Chemistry 1*
- _____ 3. Physics 103 - *Intro to Physics 1*
- _____ 4. Physics 104 - *Intro to Physics 2*

		x					x
	x*					x	x
							x

* - indicates that there is more than one option.
ex. English 101 or 102 will help fulfill the English requirement, but English 100 is required.

R - indicates recommended elective

x¹ - indicates non-specific credit granted

NOTE: the above listed are EXAMPLE INSTITUTIONS
Consult bctransferguide.ca for transfer to these and other institutions

Mathematics and Physics Majors

36 credits in SCIENCE

at least 3 credits in laboratory science, 15 credits other science courses and at least 18 credits in 200 level in 2 or more areas

- _____ 1. Math 103 - *Differential Calculus*
- _____ 2. Math 104 - *Integral Calculus*
- _____ 3. Physics 103 - *Intro to Physics 1*
- _____ 4. Physics 104 - *Intro to Physics 2*
- _____ 5. Statistics 106 - *Statistics*
- _____ 6. Comp 105 - *Intro to Programming in C++*
- _____ 7. Math 201 - *Multivariable Calculus*
- _____ 8. Math 202 - *Vector Calculus*
- _____ 9. Math 203 - *Differential Equations*
- _____ 10. Math 220 - *Mathematical Structures & Proofs*
- _____ 11. Math 221 - *Elementary Linear Algebra*
- _____ 12. Statistics 206 - *Mathematical Statistics*
- _____ 13. Physics 201 - *Analytical Methods*
- _____ 14. Physics 202 - *Intro to Modern Physics*

	U of L BSc. Mathematics	U of L BSc Physics	UVic BSc. Mathematics	UVic. BSc. Physics	UBC BSc Mathematics	UBC BSc. Physics	UBCO BSc Mathematics	UBCO BSc. Physics	UNBC BSc. Mathematics	UNBC BSc. Physics
X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X
R	X	R	X	X	X	X	X	X	R	X
R	X	R	X	X	X	X	X	X	R	X
X		X		X		X		X		
X	X		X	X1		X		X	X	X
X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X
X		X1		X	X	X	X	X	X	
X		X1		X		X	X	X	X1	
X	X	X	X	X	X	X	X	X	X	X
X		X		X		X		X		
			X		X		X			X1
			X		X		X			X

6 Credits in English

- _____ 1. English 100 - *English Composition*
- _____ 2. English 101 - *Intro to Poetry & Drama*
- _____ 3. English 102 - *Intro to Prose Fiction*

X	X	X	X	X	X	X	X	X	X	X
X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*
X*	X*	X*	X*	X*	X*	X*	X*	X*	X*	X*

6 Credits in Math (at least 3 credits in Calculus)

- _____ 1. Math 103 - *Differential Calculus*
- _____ 2. Math 104 - *Integral Calculus*

X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X

6 Credits in Arts other than English

- _____ 1. Elective
- _____ 2. Elective

X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X

6 Credits in Arts, Science or other areas (suggested courses)

- _____ 1. Astronomy 100 - *Astronomy*
- _____ 2. Biology 101 - *Intro to Biology 1*
- _____ 3. Biology 102 - *Intro to Biology 2*
- _____ 4. Chemistry 101 - *Fundamentals of Chemistry 1*
- _____ 5. Chemistry 102 - *Fundamentals of Chemistry 2*

	X		X			X	X			X
			X			X	X			

SAMPLE SEQUENCING PLANS

BIOLOGY MAJOR

YEAR 1

Fall Semester

BIOL 101

Intro to Biology 1

CHEM 101

Fundamentals of Chemistry 1

MATH 103

Differential Calculus

PHYS 103

Intro to Physics 1

ENG 100

English Composition

Winter Semester

BIOL 102

Intro to Biology 2

CHEM 102

Fundamentals of Chemistry 2

MATH 104

Integral Calculus

PHYS 104

Intro to Physics 2 or Arts Elective

ENG 101

Intro to Poetry & Drama

OR

ENG 102

Intro to Prose

YEAR 2

Fall Semester

BIOL 201

Cell Biology

BIOL 204

Ecology

BIOL 208

Vertebrate Biology

CHEM 201

Organic Chemistry 1

Winter Semester

BIOL 202

Intro to Biochemistry

BIOL 203

Genetics

BIOL 200

Intro to Microbiology

CHEM 202

Organic Chemistry 2

Arts, Science or Other Elective**Arts, Science or Other Elective**

BIOCHEMISTRY

MAJOR

YEAR 1

Fall Semester

BIOL 101

Intro to Biology 1

CHEM 101

Fundamentals of Chemistry 1

MATH 103

Differential Calculus

PHYS 103

Intro to Physics 1

ENG 100

English Composition

Winter Semester

BIOL 102

Intro to Biology 2

CHEM 102

Fundamentals of Chemistry 2

MATH 104

Integral Calculus

PHYS 104

Intro to Physics 2

OR

Arts Elective

ENG 101

Intro to Poetry & Drama

OR

ENG 102 - Intro to Prose

YEAR 2

Fall Semester

BIOL 201

Cell Biology

MATH 101

Finite Math 1
(U of L)

OR

STATS 106

Statistics
(UVic, UBC, UNBC)

BIOL 203

Genetics

CHEM 201

Organic Chemistry 1

Winter Semester

BIOL 202

Intro to Biochemistry

MATH 102

Finite Math 2
(U OF L)

OR

COMP 105

Intro to C++

OR

CHEM 215

Analytical Chemistry

BIOL 200

Intro to Microbiology (Uof L)

OR

MATH 201

Multivariate Calculus (UBC)

CHEM 202

Organic Chemistry 2

CHEMISTRY

MAJOR

YEAR 1

Fall Semester

BIOL 101

Intro to Biology 1

CHEM 101

Fundamentals of Chemistry 1

MATH 103

Differential Calculus

PHYS 103

Intro to Physics 1

ENG 100

English Composition

Winter Semester

BIOL 102

Intro to Biology 2

CHEM 102

Fundamentals of Chemistry 2

MATH 104

Integral Calculus

PHYS 104

Intro to Physics 2

OR

Arts Elective

ENG 101

Intro to Poetry & Drama

OR

ENG 102

Intro to Prose

YEAR 2

Fall Semester

BIOL 201

Cell Biology

CHEM 201

Organic Chemistry 1

Computing 105

Intro to C++ (UNBC)

OR

MATH 201

Multivariate Calculus (UBC, UVic)

Arts Elective

Arts, Science or Other Elective

Winter Semester

BIOL 202

Introduction to Biochemistry

CHEM 202

Organic Chemistry 2

MATH 221

Linear Algebra (UNBC)

OR

STAT 106

Statistics (UVic)

CHEM 215

Analytical Chemistry

Arts, Science or Other Elective

GEOGRAPHY

MAJOR

YEAR 1

Fall Semester

BIOL 101

Introduction to Biology 1

Geography 101

Physical Geography

MATH 103

Differential Calculus

ENSC 101

Introduction to Environmental Science

ENG 100

English Composition

Winter Semester

BIOL 102

Introduction to Biology 2

Geology 105

Introduction to Geology

STAT 106

Statistics

PHYS 104

Intro to Physics 2

OR

Arts Elective

ENG 101

Introduction to Poetry & Drama

OR

ENG 102

Intro to Prose

YEAR 2

Fall Semester

BIOL 204

Ecology

GEOG 230

Meteorology, Climatology and Hydrology

CHEM 101

Fundamentals of Chemistry 1

(U of L, UNBC)

OR

Physics 103

Intro to Physics 1 (U of L)

Arts Elective

Arts, Science or Other Elective

Winter Semester

GEOG 210

Geography of BC

Geology 220

Enviro Geology & Natural Hazards

ENST 200

Intro to Environmental Sustainability

CHEM 102

Fundamentals of Chemistry 2 (UNBC)

OR

Arts Elective

Arts, Science or Other Elective

ENVIRONMENTAL SCIENCE

MAJOR

YEAR 1

Fall Semester

BIOL 101

Introduction to Biology 1

CHEM 101

Fundamentals of Chemistry 1

GEOG 101

Physical Geography

ENSC 101

Intro to Environmental Science

ENG 100

English Composition

Winter Semester

BIOL 102

Intro to Biology 2

CHEM 102

Fundamentals of Chemistry 2

STAT 106

Statistics

ENST 200

Intro to Environmental Sustainability

ENG 101

Intro to Poetry & Drama

OR

ENG 102

Intro to Prose

YEAR 2

Fall Semester

GEOG 211

Intro to Geographic Information Systems

BIOL 204

Ecology

BIOL 208

Vertebrate Biology (U of L, SFU)

CHEM 201

Organic Chemistry 1

GEOL 105

Intro to Geology

Winter Semester

MATH 103

Differential Calculus

BIOL 200

Intro to Microbiology

(U of L)

Geography 230

Meteorology, Climatology and Hydrology

GEOG 210

Geography of BC

Arts, Science or Other Elective

CHEM 215

Analytical Chemistry

MATH MAJOR

YEAR 1

Fall Semester

MATH 103

Differential Calculus

PHYS 103

Intro to Physics 1

COMP 105

Intro to C++

STAT 106

Statistics

ENG 100

English Composition

Winter Semester

MATH 104

Integral Calculus

PHYS 104

Intro to Physics 2

MATH 221

Linear Algebra

Arts, Science or Other Elective

ENG 101

Intro to Poetry & Drama

OR

ENG 102

Intro to Prose

YEAR 2

Fall Semester

MATH 201

Multivariate Calculus

MATH 203

Differential Equations

Arts, Science or Other Elective

CHEM 101

Fundamentals of Chemistry 1

(UBCO)

OR

Arts, Science or Other Elective

Arts, Science or Other Elective

Winter Semester

MATH 202

Vector Calculus

MATH 220

Mathematical Structures and Proofs

STAT 206

Mathematical Statistics

CHEM 102

Fundamentals of Chemistry 2

(UBCO)

OR

Arts, Science or Other Elective

Arts, Science or Other Elective

PHYSICS

MAJOR

YEAR 1

Fall Semester

MATH 103

Differential Calculus

PHYS 103

Intro to Physics 1

COMP 105

Intro to C++

CHEM 101

Fundamentals of Chemistry 1

ENG 100

English Composition

Winter Semester

MATH 104

Integral Calculus

PHYS 104

Intro to Physics 2

MATH 221

Linear Algebra

CHEM 102

Fundamentals of Chemistry 2

ENG 101

Intro to Poetry & Drama

OR

ENG 102

Intro to Prose

YEAR 2

Fall Semester

MATH 201

Multivariate Calculus

PHYS 201

Analytical Methods

MATH 203

Differential Equations

Arts, Science or Other Elective

Arts, Science or Other Elective

Winter Semester

MATH 202

Vector Calculus

PHYS 202

Intro to Modern Physics

MATH 220

Mathematical Structures and Proofs

Arts, Science or Other Elective

Arts, Science or Other Elective

Institution Specific Science Requirements that can be completed at COTR within the ASc:

University of Lethbridge

BSc. Biology	BSc. Biochemistry	BSc. Chemistry
BIOL 101, 102, 200, 203, 204 CHEM 101, 102, 201, 202 MATH 103 PHYS 103	BIOL 101, 102, 200, 201, 202, 203 CHEM 101, 102, 201, 202 MATH 103, 104 PHYS 103	BIOL 101, 102, 201, 202 CHEM 101, 102, 201, 202 MATH 103, 104, 221 PHYS 103

BSc. Geography/Env Sci	BSc. Mathematics	BSc. Physics
BIOL 101, 102, 200, 204, 208 ENSC 101 GEOG 101, 230 GEOL 106 CHEM 101, 102, 201 PHYS 103	MATH 103, 104, 201, 202, 203, 220, 221 STAT 106, 206	MATH 103, 104, 201, 202, 221 PHYS 103, 104, 201, 202 CHEM 101 COMP 105

University of Victoria

BSc. Biology	BSc. Biochemistry	BSc. Chemistry
BIOL 101, 102, 201, 202, 203, 204 CHEM 101, 102, 201, 202 MATH 103, 104 PHYS 103	BIOL 102, 200, 201, 203 CHEM 101, 102, 201, 202 MATH 103, 104 PHYS 103, 104 STAT 106	BIOL 102 CHEM 101, 102, 201, 202 MATH 103, 104, 201 PHYS 103, 104 STAT 106

BSc. Geography/Env Sci	BSc. Mathematics	BSc. Physics
GEOG 101, 210, 230 MATH 103, 104	MATH 103, 104, 201, 202, 203, 220, 221 STAT 106, 206	MATH 103, 104, 201, 202, 221 PHYS 103, 104, 201, 202 CHEM 101, 102

University of Northern British Columbia

BSc. Biology	BSc. Biochemistry	BSc. Chemistry
BIOL 101, 102, 200, 203, 201, 202, 204 CHEM 101, 102, 201, 202 MATH 103 PHYS 103 STAT 106	BIOL 101, 102, 200, 201, 202, 203 CHEM 101, 102, 201, 202 MATH 103, 104 PHYS 103, 104 STAT 106	BIOL 101, 102 CHEM 101, 102, 201, 202 MATH 103, 104, 221 PHYS 103, 104 COMP 105

BSc. Geography/Env Sci	BSc. Mathematics	BSc. Physics
BIOL 101, 102, 200, 204 ENSC 101 GEOG 101, 210 230 GEOL 105, 106, 220 MATH 103, 104 STAT 106 CHEM 101, 102, 201	MATH 103, 104, 201, 202, 203, 220, 221 STAT 106, 206 COMP 105	MATH 103, 104, 201, 202, 221 PHYS 103, 104, 201, 202 CHEM 101 COMP 105

PHYS 103, 104		
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University of British Columbia - Vancouver

BSc. Biology	BSc. Biochemistry	BSc. Chemistry
BIOL 101, 102, 201, 203, 204, 200 or 208 CHEM 101, 102, 201, 202 MATH 103, 104 PHYS 103	BIOL 101, 102, 200, 201, 202, 203 CHEM 101, 102, 201, 202 MATH 103, 104 PHYS 103, 104 STAT 106	CHEM 101, 102, 201, 202 MATH 103, 104, 201 PHYS 103, 104

BA Geography	BSc. Mathematics	BSc. Physics
GEOG 101, 210 GEOL 105, 106, 210, 220	MATH 103, 104, 201, 202, 203, 220, 221 STAT 106, 206 PHYS 103, 104	MATH 103, 104, 201, 202 PHYS 103, 104, 201, 202

University of British Columbia - Okanagan

BSc. Biology	BSc. Biochemistry	BSc. Chemistry
BIOL 101, 102, 201, 203, 204, 200 or 208 CHEM 101, 102, 201, 202 MATH 103, 104 PHYS 103, 104	BIOL 101, 102, 200, 201, 202, 203 CHEM 101, 102, 201, 202 MATH 103, 104, 201 PHYS 103, 104 STAT 106	CHEM 101, 102, 201, 202 MATH 103, 104, 201, 221 PHYS 103, 104

BSc. Geography	BSc. Mathematics	BSc. Physics
BIOL 101, 102, 204 GEOG 101, 210, 230 CHEM 101, 102 MATH 103, 104	MATH 103, 104, 201, 202, 203, 220, 221 STAT 106, 206 PHYS 103, 104	MATH 103, 104, 201, 202 PHYS 103, 104, 201, 202 CHEM 101, 102

COURSE DESCRIPTIONS

These courses form the core of the Associate of Science Degree Program. Please see course calendar or course outlines for specific course prerequisites and when choosing courses, please consult receiving institution for specific degree requirements.

36 Credits in Science

at least 3 credits in lab science, up to 15 credits in other science courses and at least 18 credits in second year science in two or more subject area

ASTR 100 – Astronomy

This course presents an overview of historical and modern astronomical knowledge. Topics include telescope design, astronomical methods, the planets of the solar system, the life cycle of stars, and our place among the galaxies. The accompanying lab introduces students to night sky observation and real-world experience with astronomical photography.

Credits: 3.00

BIOL 101 – Introduction to Biology 1

An introduction to the structure and function of organisms with particular reference to molecular, biochemical and physiological aspects of the living world. Designed for students seeking a degree or diploma in a field of science or technology, BIOL 101, with BIOL 102, lays the foundations on which the higher-level courses in Biology are based. It is also suitable as an elective course for general interest or arts students.

Credits: 3.00

BIOL 102 – Introduction to Biology 2

BIOL 102 is an introduction to organismic and population biology with emphasis on reproduction, genetics, developmental biology, evolution, diversity, and ecology.

Credits: 3.00

CHEM 101 – Fundamentals of Chemistry 1

This course presents the fundamental principles of chemistry with particular reference to acid base and redox chemistry, electronic structure of atoms and molecules, properties of liquids, gases, solids and their solutions, phase changes, and thermochemistry. The associated laboratory exercises emphasize proper experimental techniques, data collection and analysis, safety and technical writing skills.

Credits: 3.00

CHEM 102 – Fundamentals of Chemistry 2

Together with CHEM 101, CHEM 102 provides a solid foundation in fundamental chemical principles. Topics include equilibrium, thermodynamics, kinetics, electrochemistry, chemistry of the main group elements and the chemistry of organic and biomolecules. The associated laboratory exercises emphasize proper experimental techniques, data collection and analysis, safety and technical writing skills.

Credits: 3.00

COMP 105 - Introduction to C/C++

Covers the basic programming techniques of C and C++ languages with an introduction to structured programming and abstract data types.

Credits: 3.00

ENSC 101 - introduction to Environmental Science

This course introduces students to scientific analysis and communication of environmental issues. Students will learn about natural systems and the complex interactions among their biological, physical, chemical and anthropogenic components. Students will consider Western and Indigenous perspectives, governance, and economic factors to critically evaluate and communicate environmental problems. Students will investigate how these issues affect various aspects of the ecosphere, including humans, and will use integrated knowledge and perspectives to explore sustainable solutions. Laboratory activities, field trips and guest lectures will offer the opportunity to study regional environments and local environmental issues.

Credits: 3.00

GEOG 101 - Physical Geography

This course examines the concepts and processes of physical geography that govern the function of the atmosphere, lithosphere, hydrosphere, and biosphere using an earth-systems approach. Course lectures and lab topics introduce the sciences of cartography, meteorology, climatology, geomorphology, hydrology, biogeography, and soils. A focus on how human activities impact the environment, such as climate change and other real world issues will also be addressed.

Credits: 3.00

GEOL 105 - Introduction to Geology

An introduction to the major principles of physical and historical geology covering the origin and structure of the Earth, plate tectonics, volcanism and other mountain building processes, the erosion of the Earth's crust, and the formation and properties of minerals and rocks.

Credits: 3.00

GEOL 106 - Physical and Historical Geology

This course is an introduction to the major principles of structural and historical geology. Historical geology topics include geologic time, relative and absolute dating techniques, organic evolution, the study of fossils and the geologic history of the earth from the Precambrian to the present. Mineral deposits and natural resource issues will also be examined

Credits: 3.00

PHYS 103 - Intro to Physics 1

This course introduces the student to how calculus is used to build physical theory and to solve problems in kinematics, dynamics, momentum, and center of mass calculations. In addition, the student is introduced to several conservation laws, in particular conservation of mechanical energy and linear and angular momentum.

Credits: 3.00

PHYS 104 – Intro to Physics 2

This course builds on PHYS 103. Electric and magnetic fields are used as examples of vector fields, and the concept of flux and Gauss's theorem are used to calculate the electric field in simple cases. Line integrals and the gradient are introduced as a means of going between electric field and potentials. Students are taught the uses for resistors, capacitors, and inductors and how to do calculations for circuits which use them. Ideas from relativity and quantum mechanics are introduced.

Credits: 3.00

BIOL 200 – Introduction to Microbiology

Introduction to Microbiology is an introduction to the general principles of microbiology. Lectures and laboratory exercises explore fundamental topics of microbiology, environmental microbiology and molecular microbiology such as diversity of microorganisms, microbial structure, metabolism, genetics and microbial ecology emphasizing applied, medical and environmental microbiology. The laboratory introduces methods for safe handling of microorganisms, techniques of microbial isolation, enumeration and identification as well as experiments relevant to lectures.

Credits: 3.00

BIOL 201 – Cell Biology

This course studies the relationship between cell structure and cell function. The structure function of the cell membrane and most organelles are covered in detail. Topics also include the evolution of the eukaryotic cell, cell movements, and cell reproduction. An introduction to cytogenetics are also presented. The material in Biology 201 is an integral part of an undergraduate biological sciences program and is especially appropriate for students interested in health-related sciences, microbiology, genetics, developmental biology, biochemistry, botany, zoology, and general biology.

Credits: 3.00

BIOL 202 – Introduction to Biochemistry

BIOL 202 is continuation of BIOL 201. Through lectures and labs the course emphasizes the structural and functional aspects of cellular chemistry. Topics include cellular energetics, enzyme kinetics, respiration, photosynthesis, membrane transport, the genetic code, glycobiology, lipid biology, and protein biology. The laboratory exercises emphasize proper experimental techniques, data collection and analysis and technical writing skills.

Credits: 3.00

BIOL 203 – Genetics

Genetics is the study and understanding of inheritance and development of organisms. This course will provide an introduction to genes and gene function. Mendelian and extra-mendelian genetics and molecular genetics review and expand on these topics explored in first year biology. Topics in transmission, molecular and quantitative genetics will also be discussed. Lab material will include descriptive aspects, techniques, data analysis and experimentation.

Credits: 3.00

BIOL 204 – Ecology

The course studies the interactions between organisms and their environment at the organismal, population, community and ecosystem levels. Topics considered include energy flow, nutrient cycling, ecological succession, population dynamics and evolutionary processes. Local examples may be used to illustrate some of the principles.

Credits: 3.00

BIOL 208 – Vertebrate Biology

This course covers the evolution and comparative anatomy of cephalochordates, urochordates, fish, amphibians, reptiles, birds, and mammals. The comparative anatomy of major organ systems among fishes, amphibians, birds, and mammals will be studied in the lab via dissection of representative organisms. The lab will emphasize the relationship between structure and function of vertebrate organisms while the lecture will focus on current controversies and discoveries in the scientific study of vertebrate evolution.

Credits: 3.00

CHEM 201 – Organic Chemistry

CHEM 201 is an introductory course in organic chemistry including the structure and reactions of aliphatic and aromatic hydrocarbons and their derivatives. The laboratory stresses the techniques of preparation, purification and identification of organic compounds.

Credits: 3.00

CHEM 202 – Organic Chemistry 2

CHEM 202 is a continuation of CHEM 201 involving the structure and reactions of the more complex aliphatic, aromatic and heterocyclic systems including an introduction to natural product chemistry and industrially important organic compounds. The laboratory stresses synthetic methods and some analytical procedures.

Credits: 3.00

CHEM 215

This course provides a solid background in the principles of analytical chemistry and their applications in fields such as environmental science. Topics include measurements and their errors, the use of statistics in data analysis and sampling, redox-, complexometric- and acid-base titrations, absorption and emission forms of atomic and molecular spectroscopy, electrochemical methods of analysis and separation techniques. The laboratory exercises emphasize proper experimental techniques, data collection and analysis, safety and technical writing skills.

Credits: 3.00

GEOL 220 – Environmental Geology and Natural Disasters

This course examines the nature of a variety of natural hazards including events such as earthquakes, volcanic eruptions, landslides, river flooding, severe weather, wildfire, and hurricanes. Current methods of analysis, prediction and mitigation are investigated. Laboratory activities concentrate on working from real-life situations in order to draw conclusions about natural hazards issues.

Credits: 3.00

GEOG 211

Geographic Information Systems (GIS) is an applied field encompassing the acquisition, storage, processing, analysis and presentation of spatial information. GIS has become an essential tool for spatially informed decision making in government, academic and private sectors. Course lectures will cover underlying theory, concepts and applications of GIS. Topics covered include spatial data acquisition, raster and vector data models, database, cartography and geoprocessing. Lab sessions will apply lecture theory through hands-on experience with industry standard GIS software. Next Offered 2021/2022

Credits: 3.00

GEOG 230

This course will examine the basic principles and processes governing the Earth's weather and climate, including the movement of water. In this course, students will analyze the linkages between the atmosphere, hydrosphere, and land surface interactions responsible for creating the weather and climate that we experience each day. Specifically, we will examine fluxes of mass and energy exchanges, radiation, precipitation, winds, weather systems, fluvial hydrology, water balances, and global climates. First Offering 2021/2022

Credits: 3.00

GEOG 251

This course will introduce methods for collecting, analyzing, and reporting geographic data. Course topics include gathering samples, describing data and theoretical distributions, testing significance, and exploring spatial relationships. Real-world examples from both physical and human geography as well as other related subject areas will provide a foundation for more advanced courses and applications. All lab activities are computer based using statistical software.

Credits: 3.00

MATH 201 – Multivariate Calculus

Math 202 extends the theory of integration to multivariate functions. Multiple integrals are introduced and applied, then further extended to general curves and surfaces in space. This course is intended for science and engineering students. It is a continuation of MATH 201. Presents theory relating to integration, gradients, curl, and divergence in a variety of coordinate systems. Theorems of Green, Stokes, and Gauss are presented

Credits: 3.00

MATH 202 – Vector Calculus

This course takes calculus from the two dimensional world of single variable functions into the three dimensional world, and beyond, of multivariable functions. Topics include vector geometry and the analytic geometry of lines, planes, and surfaces; calculus of curves in two and three dimensions, including arc length and curvature; calculus of scalar valued functions of several variables, including partial and directional derivatives, the gradient, the chain rule, Lagrange multipliers and optimization problems.

Credits: 3.00

MATH 203 – Differential Equations

Differential equations are used to model change throughout the sciences. Course topics include techniques for solving first order differential equations (separable equations, exact equations, integrating factors) with applications (population dynamics, mechanics), homogeneous and general second order linear equations, the Wronskian, higher order linear equations, power series solutions, and the Laplace transform. General theory such as existence and uniqueness theorems will be discussed as appropriate.

Credits: 3.00

MATH 220 – Mathematical Structures and Proofs

This course provides students with a transition from mathematics courses at the first-year level to rigorous, theoretical courses at the upper-division in which mathematical proof is emphasized. The nature and purpose of mathematical proof are examined. Many common techniques of proofs are studied and applied in analyzing a large number of elementary proofs. Students spend a considerable amount of time analyzing sample proofs and constructing their own proofs. No single area of mathematics will be emphasized; examples may be chosen from abstract algebra, number theory, analysis and combinatorics.

Credits: 3.00

MATH 221 – Elementary Linear Algebra

This course is intended for students who require an appreciation of higher mathematics but don't require calculus. Math 101 stresses a logical and critical thinking approach while investigating an introduction to linear algebra, linear programming, the simplex method, set theory and counting, an introduction to probability and statistics, and game theory

Credits: 3.00

PHYS 201 – Analytical Methods

Analytical Mechanics is a review of kinematics, Newton's Laws, and rotational motion. This course also covers non-inertial reference frames, central forces, Kepler's Laws of Motion and rigid bodies in 3D.

Credits: 3.00

PHYS 202 – Introduction to Modern Physics

Modern Physics covers wave-particle duality of matter, special relativity, and processes in atomic, nuclear, and solid state. It also introduces students to quantum mechanical devices and techniques.

Credits: 3.00

STAT 206 – Calculus Based Statistics

This course is intended for students who are pursuing Engineering on a Bachelor of Science degree. Topics include: probability theory, random variables, expected values, variance, moments, probability distributions (binomial, hypergeometric, Poisson, normal, geometric, negative binomial, and gamma), estimation (properties of estimators, method of maximum likelihood, and method of moments), hypothesis testing (type I and II errors, and generalized likelihood ratio tests), distributions (χ^2 , t, and F) and their tests, goodness of fit and contingency tables, regression, and ANOVA. Statistics are used to analyze data throughout the sciences, including Biology, Chemistry, Commerce, Computer Science, Engineering, Geology, Mathematics, Medicine, and Physics.

Credits: 3.00

OR Any Science, Statistics, Kinesiology or Mathematics course not used for other requirements

6 Credits in first year English (ENG 100 and one of ENG 101 or ENG 102)

ENG 100 – English Composition

English 100 focuses on composition for academic purposes and develops a student's ability to write clearly and effectively. Students also learn the fundamentals of critical thinking, persuasive writing techniques (including rhetorical appeals and devices), scholarly research, and academic reading.

Credits: 3.00

ENG 101 – Intro to Poetry and Drama

An introduction to the critical reading of literature through the study and analysis of poetry and drama across historical periods from Shakespeare to twenty-first century poets and dramatists. While this course will teach students how to perform college-level literary analysis of canonical texts, it will also teach students how to question and evaluate the cultural narratives that literature circulates. As such, the class will explore questions of gender, class, race, nationhood/nation building, and the problematic literary canon in order to develop strategies for negotiating complex literary texts and to become better, more nuanced readers.

Credits: 3.00

ENG 102 - Intro to Prose

English 102 introduces students to the genre of literary fiction from the origins of the short story in early nineteenth century to the novels of twentieth and twenty-first century. The aim of English 102 is to read fiction with an understanding of genre, technique and form; to apply various critical strategies to literary texts; and to develop analytical writing skills appropriate to essays at the university level. Ultimately, the course encourages students to consider how narrative forms can shape, challenge and respond to their moral, social, and political contexts.

Credits: 3.00

6 Credits in Mathematics (at least 3 credits in calculus)

MATH 103 – Differential Calculus

This course is intended for students who are pursuing a Bachelor of Science degree. Topics include functions, limits, continuity, derivatives and their interpretation, differentiation rules, techniques of differentiation, implicit differentiation, inverse functions, exponential functions, logarithms, applications of differentiation such as linear approximations, Newton's method, related rates, analysis of graphs and optimization, the Mean Value Theorem, definite and indefinite integrals, integration by substitution, Riemann sums, and applications of integration. Calculus is a necessary step in any career in the sciences including Biology, Chemistry, Commerce, Computer Science, Engineering, Geology, Mathematics, Medicine, and Physics. It is also useful in any field which uses statistics to analyze data.

Credits: 3.00

MATH 104 – Integral Calculus

Topics include: Logarithmic, exponential and hyperbolic functions, complex numbers, integration techniques (substitution, parts, partial fractions, trigonometric substitution, numerical methods), L'Hopital's rule, improper integrals, sequences, series, convergence tests (divergence, integral, comparison, limit comparison, ratio, root, and alternating series tests), Taylor Maclaurin and Fourier series, vectors (dot products, vector valued functions), and polar curves. Calculus is a necessary step in any career in the sciences including Biology, Chemistry, Commerce, Computer Science, Engineering, Geology, Mathematics, Medicine, and Physics. It is also useful in any field which uses statistics to analyze data.

Credits: 3.00

STAT 106 – Statistics

This course introduces the fundamental ideas of statistics and can be applied to any discipline. Topics include: collection, description, and presentation of data; calculating central tendency and dispersion; probability and statistical inference; hypothesis testing (means, proportions, variances, one and two samples); correlation and regression; decision making and sampling, Goodness of Fit Tests, and Contingency Tables.

Credits: 3.00

MATH 101 – Finite Mathematics 1

This course is intended for students who require an appreciation of higher mathematics but don't require calculus. Math 101 stresses a logical and critical thinking approach while investigating an introduction to linear algebra, linear programming, the simplex method, set theory and counting, an introduction to probability and statistics, and game theory

Credits: 3.00

MATH 102 – Finite Mathematics 2

This course is intended for students entering programs that require an appreciation of higher mathematics, but do not require calculus. The course covers regular and absorbing Markov Processes, operations and conversions in other bases, introduction to logic (statements, truth tables, laws, simplification), Boolean Algebra, logic gates, sets and relations, logical puzzles, algorithms and flowcharts, graphs, directed graphs, trees, and Euler and Hamiltonian graphs. MATH 102 is usually taken by students working towards a B.A. or a B. Ed. Students planning to take a B.Sc may take MATH 102 as an elective, but need to take Calculus, as well, as a requirement of that degree. MATH 102 is often taken by Business students, as it is good preparation for further study in computing.

Credits: 3.00

MATH 221 - Elementary Linear Algebra

This course is intended for students who require an appreciation of higher mathematics but don't require calculus. Math 101 stresses a logical and critical thinking approach while investigating an introduction to linear algebra, linear programming, the simplex method, set theory and counting, an introduction to probability and statistics, and game theory

Credits: 3.00

6 Credits in Arts (other than English)

HUMANITIES

COMC 101 - Tech. and Professional Writing

In this introductory course, students develop practical writing skills for the workplace. Activities centre on effective writing styles and offer detailed guidelines on planning, organizing, composing, and revising documents for a range of communication tasks. This course reviews some grammar essentials and leads students to be resourceful and successful communicators in traditional and virtual correspondence.

Credits: 3.00

COMC 102 - Advanced Professional Comc.

This course presents the written and oral communication strategies required in any workplace environment. Students gain practical experience that centers on gathering, summarizing and critically assessing information to produce professional documents. Students will also gain a better understanding on how basic design elements enhance the readability of workplace documents and online communication. This course also focuses on helping students develop speaking skills appropriate to informal and formal presentations and interviews.

Credits: 3.00

FREN 101 - Beginners' French 1

This is an introductory language course designed for the absolute beginner in French. The focus of this course is to help students become functionally proficient in the French language. The design of this course is based on the communicative approach to equip students with basic comprehension, writing and communication skills while highlighting the basic foundation and grammatical structures of the language. This course also explores the diversity and influence of the French culture in a global context.

Credits: 3.00

FREN 102 – Introductory French 2

This course builds on the skills developed in FREN101 (Introductory French 1). The focus of this course is to help students become functionally proficient in the French language through the basic skills of reading, writing, listening and speaking. The diverse and culturally rich characteristics of the French-speaking world will be discussed and explored.

Credits: 3.00

FNST 101 – First Nations Studies 1

This course is an introduction to the multi-disciplinary field of Aboriginal studies. The prehistory, history, and traditional and contemporary cultures of Aboriginals in Canada and their various perspectives are addressed. Additionally, the historical overview of Aboriginal/non-Aboriginal relations and their effects are explored.

Credits: 3.00

HIST 201 – Pre – Confederation Canada

This course surveys Canada's past before 1867. It looks at original Indigenous inhabitants through French settlers and English conquerors to colonial immigrants, labourers, businessmen, politicians, and women, a panoply of fascinating historical agents. In addition, significant events, such as group contact/relations, expansion/settlement processes, economic undertakings, military battles as well as rebellions, social developments, and political evolutions, are examined. Attention is paid to time's impact on continuity and change throughout the period, but greater emphasis is placed on understanding these agents and events through the major analytical categories of race/ethnicity, gender, and class. Doing so helps foster students' interest in the importance of understanding this country's past and allows them to acquire greater historical consciousness to critically understand Canadians' current context.

Credits: 3.00

HIST 202 – Post – Confederation Canada

A historical survey of Canada, this course traces the country's development from the immediate aftermath of Confederation to contemporary times. Over that period, significant actors and events, like the World Wars and the Depression, will be considered. Greater attention, however, will be paid to changes and continuities arising from Canada's territorial growth; consolidation under the national policy, including incorporating large numbers of immigrants into the country; cleavages in their various manifestations; imperialism-continentalism choices; industrialization/urbanization/reform movements; post-war international and social decisions; Sixties' upheavals, and Indigenous marginalization. All of these areas of study will help foster students' interest in the importance of understanding this country's past and allow them to acquire greater historical consciousness to critically question whether Canadians' attempts to create a great nation were best for all.

Credits: 3.00

KTUN 101 – Intro to Ktunaxa Language

This course is an introduction to the Basic Ktunaxa series with an emphasis on the structure and syntax of Ktunaxa at a basic level. It provides students with the opportunity to develop introductory skills in reading, writing, speaking, and comprehending the Ktunaxa Language; the emphasis is on speaking and responding to basic commands and key phrases. Students develop the skills, strategies, and resources to support the revitalization of Ktunaxa language in their homes, their schools, and their communities. Experiential/communication-based instruction is a feature of this course.

Credits: 3.00

KTUN 102 – Basic Ktunaxa Language

This course is the second part of the introduction to basic Ktunaxa language. The course continues to focus on the structure and syntax of the Ktunaxa language at a basic level. It provides the opportunity to KTUN 101 students and basic speakers to further develop their skills in reading, writing, speaking, and comprehending the Ktunaxa language. The course emphasis is on natural conversations, greetings, requests, and responses to everyday situations in the classroom, in the family, and in the community. Participants will begin to understand how to develop their own language resources for use in the family home.

Credits: 3.00

PHIL 101 – Intro to Philosophical Inq 1

Philosophy 101 is designed to introduce students to the questions and ideas in the world of thought and the skills of moral reasoning. In the context of both classical and contemporary philosophers, the moral principles used to justify how we should live are discussed. What are the sources of such principles? What are their limitations? An analysis of various moral traditions will seek to answer Socrates' timeless ethical question, "How ought we to live?"

Credits: 3.00

PHIL 102 – Intro to Philosophical Inq 2

Philosophy 102 is designed to explore three primary subject areas of philosophy: the nature of reality (metaphysics), the study of knowledge (epistemology), and the question of God (the philosophy of religion). Resources include Plato, Aristotle, Descartes, Materialism, Locke, Hume, Kant, and many more, both classical and contemporary. Some of the particular issues explored are: the question of transcendent reality, the mind-body problem, free will versus determinism, the role of mind and perception in knowing, the claims of skepticism, and the central arguments for and against the existence of God.

Credits: 3.00

PHIL 180 – The Search for Meaning

This course explores the question of meaning in life, especially in the modern setting. The disintegration of externally provided meanings and the proposition of a universe without objective value poses specific issues and questions for individuals: Where can meaning be found? Is meaning subjective? What role does God, religion, spirituality, nature, science, and society play? After examining the philosophical context which structures the question of modern meaning, we explore diverse solutions (religious, spiritual, atheistic, etc.). Sources include Nietzsche, Kierkegaard, Tolstoy, Camus, Sartre, Freud, Jung, Viktor Frankl, Bertrand Russell, and others.

Credits: 3.00

SPAN 101 – Beginners' Spanish

This is an introductory language course and is designed for the absolute beginner in Spanish. The focus of this course is to help students become functionally proficient in the Spanish language through the basic skills of reading, writing, listening, and speaking. This course also explores the diversity and influence of the Spanish culture in a global context.

Credits: 3.00

SPAN 102 – Introductory Spanish 2

This course continues from SPAN 101. The focus of this course is to help students become functionally proficient in the Spanish language through the four basic skills of language acquisition: reading, writing, listening and speaking. The diverse and culturally rich characteristics of the Spanish-speaking world will be discussed and explored.

Credits: 3.00

SOCIAL SCIENCES

ANTH 101 – Intro to Cultural Anthropology

This course involves an in-depth exploration of the concept of culture and the cross-cultural study of human diversity within the discipline of anthropology. Students focus on topics such as anthropological research, ethics, culture, worldview, gender, language, marriage, families and households, Indigenous peoples, religion, and globalization. Students also engage in self-reflexive examination of their own worldviews, perceptions, and biases in relation to other peoples and cultures.

Credits: 3.00

ANTH 105 – Intr. Health/Well. Indigenous

This course adopts a holistic approach to understanding health and wellness within Indigenous communities. Students examine many factors and conditions that impact Indigenous community health from a strength based rather than problem focused approach. This course also focuses on Indigenous worldviews in terms of how community health and wellness is articulated and maintained. Traditional knowledge and Indigenous scholarship are incorporated alongside anthropological perspectives. Whether delivered face to face or online, the course is treated as an interactive lecture series. Indigenous representatives from local communities and scholars knowledgeable about course topics share their valuable insights and knowledge with students.

Credits: 3.00

ANTH 120 – Indigenous Worldviews

Through the use of decolonized pedagogical framework students witness and explore indigenous issues in Canada with a specific focus on British Columbia exclusively from an Indigenous perspective. Indigenous worldviews on those contemporary issues are heard through studying literature and other ways of knowing from Indigenous peoples. The meaning and impacts of decolonization, treaties, cultural appropriation, self-governance, empowerment, cultural survival, and nation rebuilding are also explored.

Credits: 3.00

CRIM 101 – Introduction to Criminology

This course is an introduction to the major theories, historical, Indigenous and modern, which provide explanations of crime and criminal behavior. Various typologies of crime are also explored as well as topics such as crime statistics, crime correlates and trends, crime and the media, fear of crime and victims of crime.

Credits: 3.00

CRIM 103 – Psyc. Expl. Of Crim & Deviant

This course is an introduction to biological, psychiatric, psychological and social/environmental explanations of criminal and deviant behaviour. This course explores specific types of behaviours such as violent offences (homicide), sexual offences and family violence through a psychological lens. The unique nature and needs of Indigenous, female, youth, and mentally ill offenders will also be explored.

Credits: 3.00

CRIM 131 - Intro to Criminal Justice

This course involves a critical examination of the structure and operation of the system that responds to crime and criminal behaviour: the police, courts and corrections. This course also examines the relationship between these agencies and the impacts and implications of the system. An emphasis is placed on experiential and interactive learning where students will engage with various individuals involved in the system. This course also includes an introduction to Indigenous justice models, community and restorative justice.

Credits: 3.00

CRIM 135 – Introduction to Canadian Law

This course is a general introduction to the principles of jurisprudence and the legal institutions of Canada. Students will study Canadian legal systems, the various ways law is made and organized, different explanations and perspectives of law, and its history and role in Canadian society. Students will learn basic concepts in public and private law, including constitutional, family, criminal, and tort law and will also learn basic techniques of legal reasoning and research.

Credits: 3.00

CRIM 210 – Law Youth and Young Offenders

This course is an analysis of the nature, prevalence, characteristics and consequences of youth crime, deviance and responses to youth crime in Canada. Students examine the social construction of youth crime and young offenders. The history of youth crime legislations, legal frameworks, theoretical explanations and statistics of youth deviance are analyzed.

Credits: 3.00

ECON 101 – Microeconomics

This course deals with the economic principles that govern the individual segments of the economy. Topics include supply and demand, price elasticity, utility, cost of production, perfect and imperfect market structures, theory of production, the demand for factors, and the pricing of factors. Some current business situations are discussed.

Credits: 3.00

ECON 102 – Macroeconomics

This course presents the economic principles that govern the behaviour of the nation's economy. Topics include production possibility, supply and demand, national income analysis, money and banking, fiscal and monetary policy, and international trade. Current Canadian economic problems are discussed.

Credits: 3.00

ECON 207 – Managerial Economics

This course deals with quantitative strategies to assist management decision-making. Topics covered include economic optimization, demand and demand estimation, forecasting techniques, production functions, cost analysis and estimation, the perfectly competitive, monopoly, monopolistically competitive and oligopoly market structures, pricing practices, and evaluating risk. Basic differentiation techniques are introduced. This course may appeal to those students wishing to transfer to a commerce or business administration degree program or those who wish to learn about this managerial application of microeconomic principles.

Credits: 3.00

ECON 250 – Environmental Economics

This course provides an introduction to the concepts and methods of analysis in environmental economics. It applies microeconomic principles to the examination of market failures and how they may be corrected either through incentives or policy. Topics include valuing the environment, cost-benefit analysis, environmental policy analysis, and specific Canadian environmental issues and policy.

Credits: 3.00

ENST 200 – Intro to Enviro Sustainability

This course examines the central concepts of environmental sustainability and considerations for development. Students are introduced to the complexity and debate of developing resource-based industries and minimizing impacts to ecosystems and communities. Planning and management strategies for various industries, as well as the role of various agencies and organizations, will be examined with specific examples.

Credits: 3.00

POLI 100 – Intro to Politics & Government

This course introduces students to political science, assisting them to gain a foundational understanding of first, the discipline's key concepts and second, its practicalities. In order to do so, study will start with the fundamental nature of politics; power in all its guises; political beliefs, attitudes, and values acquisition; and the theoretical bases/action plans of various ideologies. Consideration will then turn to an exploration of peoples' efforts to create proper sized political units; set fundamental rules; lead and make decisions; debate and pass laws; offer advice for and put in place government programs; organize to achieve goals and aims; and devise electoral systems to make choices. To clarify and solidify learning this information, students will work up case studies so they can develop better-informed political opinions and proceed to other political science courses.

Credits: 3.00

PSYCH 101 - Introduction to Psychology 1

This course provides an introduction to the history, principles, and methods of psychology. Topics may include the brain and behaviour, sensation and perception, learning and memory, thinking and language, and states of consciousness.

Credits: 3.00

PSYCH 102 - Introduction to Psychology 2

This course is a continuation of Psychology 101. Topics may include development across the lifespan, intelligence, motivation, emotion, stress and health, personality, psychological disorders, therapy, and social behaviour.

Credits: 3.00

SOCI 101 - Sociology and the Individual

Sociology 101 introduces students to the basic concepts of sociology, while also focusing on the relationship between the individual and society. In addition to theory and research methods, topical areas include: culture, socialization, media, conformity, social structure and interaction, sex and intimate relationships, population and urbanization, and globalization. Students will increasingly acquire a sociological perspective to enrich their understanding of the social world, especially the vital link between self and society.

Credits: 3.00

SOCI 102 - Intro to Soci 2: Social Instit

This introductory course examines the major social institutions and social processes in contemporary society, and examines in the central theoretical perspectives in sociology: functionalism, conflict theory, symbolic interactionism, feminism, and postmodernism. Topics include: Family, Education, Religion, Mass Media, Economy and Work, Power, Politics and Government, Social Class and Stratification, Global Stratification, and Collective Behaviour, Social Movements and Social Change.

Credits: 3.00

FINE ARTS

CRWT 101 - Creative Writing 1

This workshop course seeks to increase the student's ability to use language with sensitivity, boldness, and precision. Students will be introduced to the craft and skills of creative writing and the dynamics of the writing process from free-writing or first draft to finished work. They are required to write regularly in prose and poetry, present some of their work in class for discussion, and produce a portfolio of finished, polished work by the end of the course

Credits:3.00

CRWT 102 - Creative Writing 2

Creative Writing 102 is a continuation of CRWT 101, designed to build on the skills and creativity developed in that course. Students are required to write regularly both in and out of class, present several pieces of prose or poetry for class discussion, and produce a portfolio of polished work by the end of the semester. Students are encouraged to experiment with new forms, participate in readings, and submit work for publication.

Credits:3.00

CRWT 202 – Creative Non-Fiction

Creative Writing (CRWT) 202 is an introductory course in the major forms of creative nonfiction, including the personal essay, memoir, biography, travel writing, history and social/cultural analysis. Students of CRWT 202 read widely in order to familiarize themselves with the genre and its techniques. They also write extensively in order to develop writing skills, practice working within a particular form and find their individual writing voice.

Credits:3.00

FA 100 – Introduction to Fine Arts

The Introduction to Fine Arts course provides students with an overview of fine arts history, philosophy, and practice, including issues surrounding the creation, display, assessment, and interpretation of art objects in cultural, social, and political contexts. Students may elect to do their major projects in essay form or produce art pieces with appropriate artist's statements.

Credits:3.00

FA 101 – Contemporary Art: A History

This course provides an opportunity to study and interpret significant social, historical, political and philosophical themes of contemporary art as a cultural expression of society. Beginning with Western Art of the 13th century, we will study the influences leading to Modern and Contemporary Art of the 20th and 21st centuries. Students explore important developments through the intersection of art, science, technology and the new forms of visual culture that are shaping the contemporary art of today.

Credits:3.00

FA 105 – Studio Foundations

The Studio Foundations course embodies fundamental hands-on experience with art materials and creative processes in drawing, painting, sculpture, printmaking, photography, and graphics. It provides students with an introduction to concepts and processes used in producing and presenting art through the study and application of creative methods and techniques, specific and multimedia approaches, and other considerations needed in the planning, rendering and presenting of art.

Credits: 3.00

FA 106 – Introduction to Drawing

This course provides a magnificent opportunity for student-artists to develop a keen sensitive eye along with deeper feelings for materials and subjects of drawing. Through lecture and hands-on experience, the student-artist explores contemporary and historical drawing practices, bringing their intellectual awareness, emotional responses, skills, and capabilities to a new level. Beginning with how one perceives an image through a broad spectrum and diverse techniques of drawing practice, the student-artist sees the indispensable role of drawing as an important aspect of art making.

Credits:3.00

FA 107 – Sculpture

The student is introduced to sculpture and 3D thinking through the element of clay, exploring a variety of historical and contemporary methods and styles. Investigation of a number of building techniques, and various embellishment and firing styles lead the student to an experience of the processes and qualities inherent in clay as a sculpture medium.

Credits:3.00

FA 108 – Introduction to Painting

The student is introduced to painting with oil and acrylic on canvas, and acrylic and water-colour on paper. Colour mixing, composition, ideas and concepts, themes, experimentation with painting materials, and problem solving are addressed. Methods of thinking, working and seeing are experienced with an open mind and spirit of exploration.

Credits:3.00

6 Credits in Arts, Science or other areas

ARTS

COMC 253 – Intercultural Communication

This course explores the inherent relationship between culture, language, and communication. The key concepts of study are identity, culture, assumptions and stereotypes, beliefs, value systems, and globalization. From theory to practice, students will investigate the impact of identity and context in intercultural interactions. The focus of this course is to help students develop meaningful strategies to communicate in today's culturally diverse communities.

Credits:3.00

ENG 202 – Intro to Modern Cdn Literature

English 202 is a survey of Canadian Literature from the 20th and 21st Century. In this course students learn about the important themes and ideological concerns of Canadian Literature in the genres of poetry and prose. As part of the course, students read work from English-Canadian writers, although some French Canadian writers may be included in translation. They will also study the work of some Indigenous Canadian writers. Because literary analysis is an important element of Canadian Literary studies, students will be introduced to some of the leading critics in the field.

Credits:3.00

ENG 211 – Engl Beowulf 18th Century

English 211 provides students with foundational knowledge of the representative (and sometimes scandalous) literary works and movements that defined British literature from c. 1200 to 1780. Students will read a wide variety of texts from Beowulf and Chaucer to the speeches and poetry of Queen Elizabeth I and the biting satire of Alexander Pope. The course will also ask students to question the scope of literary canon, incorporating texts from marginal and underrepresented writers and pointing out gaps.

Credits:3.00

ENG 212 – Major Eng Writers 19th & 20th Cen

A study of English literature that includes representative works from the Romantic, Victorian, and Modern periods. Various genres are discussed in their historical and cultural contexts.

Credits:3.00

ENG 223 – Introduction to the Novel

Throughout this course students read five or six novels representing the diversity of the genre. The novels of study range from those published in the eighteenth and nineteenth centuries to those published in the twentieth and early twenty-first centuries. Through a study of these novels, students discover the shape of traditional as well as contemporary fiction, and increase their knowledge and appreciation of the genre.

Credits:3.00

ENG 224 – Introduction to Short Fiction

This course provides an introduction to the genre of short fiction, specifically the short story. Students will read texts spanning the nineteenth to twenty-first centuries in order to develop a comprehensive understanding of the genre of the short story and its development over time. Students will also be introduced to the unique literary features of the novella.

Credits:3.00

ENG 270 – Children’s Literature

In this course, students learn about the history and development of children’s literature, from eighteenth and nineteenth-century fairy tales to twenty-first century young adult fiction. Students read a selection of the fairy tales that provide the roots for what we consider children’s literature as well as novels written for children and young adults, including Lewis Carroll’s illustrated classic *Alice in Wonderland*. In addition, since illustration plays such a large role in children’s literature, students also study picture books aimed for young children.

Credits:3.00

FA 217 – Sculpture 2 - Mixed Media

A study of contemporary themes and personal expression in mixed media sculpture, using experience and experimental approaches. The student explores clay, plaster, glass, elements from nature, and various other materials in the creation of 3D forms. In the process the student develops sensitivity to how each of these materials interrelates in the sculptural process.

Credits:3.00

FA 218 – Painting

Students continue their artistic expression through painting using diverse media including oil and/or acrylic. Students explore and are guided through contemporary, cultural and personal themes. An in depth study with experimental approaches and new concepts are combined with current artistic theory.

Credits:3.00

FNST 201 - Indigenous Ways of Knowing

This course introduces students to concepts of Indigenous traditional knowledge, worldview and epistemology through witnessing Elder teachings, insights from Indigenous scholars and experiences of Indigenous community members. This course begins with a review of knowledge creation and ways of knowing. It then explores the value, importance and uniqueness of Indigenous ways of knowing and pedagogy in comparison to Western ways of knowing and pedagogy through exploring questions that are important to First Nations peoples.

Credits: 3.00

FNST 205 - Indigenizing Practice

This course explores ways to address the learning and teaching needs of Indigenous children and youth through understanding Indigenous peoples' relationship with land, language, and community. Students will witness various Indigenous cultures and ways of knowing and traditional pedagogy through a focus on incorporating voices from Indigenous scholars, Indigenous community members, and Ktunaxa Elders. Through this experience students practice indigenizing various learning and educational environments to address the needs of both teachers and learners.

Credits: 3.00

HIST 208 - Canadian - American Relations

This course explores the relationship between Canada and the United States, primarily in diplomatic terms, touching on the military, political, economic, and cultural exchanges between the two countries. Canada has not always shared peaceful interactions with its neighbour. Students also come to understand the mercurial nature of Canadians' attitudes to Americans. Students are also made aware of the adjunct role played by Great Britain in the Canadian-American relationship.

Credits: 3.00

HIST 211 - Women in Canada 1920-Present

This course focuses on a number of important aspects of women's twentieth century experience in intriguing ways. Concepts such as domesticity and motherhood are examined through the study of marriage rituals, childrearing practices and contraceptive methods. The sexual division of labour is analyzed in terms of women's paid and unpaid work during times like the Second World War. Consumption is examined by looking at shopping habits of the 1950s. Political involvement is measured not only in the progress women made in becoming persons, but also in becoming feminists. Attempts are also made to account for the experiences of immigrant and lesbian women.

Credits: 3.00

HIST 230 - Canada's Environmental History

Nature and humans have had a long, complex, reciprocal relationship, making for certain conceptions, processes, and complexities to develop. Those developments have led to three main areas of historical overview and deeper consideration: 1) How Canadians, including Indigenous people, have thought about the natural environment and colonized landscapes; 2) How development of resources and industrialization/urbanization in Canada have had short and long term effects; and 3) How Canada's conservationists and environmentalists have responded at various junctures to address concerns, using an array interdisciplinary sources emerging in the burgeoning environmental history field, this course ultimately places the dynamic interplay between the environment and people under study to better understand that relationship overtime.

Credits: 3.00

PSYCH 207 – Social Psychology

This course provides an introduction to the study of human social behavior. Topics include research methodology, social cognition, social perception, the self, attitudes, conformity, group processes, interpersonal attraction, prosocial behaviour, aggression, and prejudice.

Credits: 3.00

PSYCH 240 – Introduction to Abnormal Psych

This course is an introduction to the research, history, and theories of abnormal psychology. A major emphasis in the course is to examine selected categories of psychological disorders such as anxiety, depression, schizophrenia, personality disorders, eating disorders, and substance use disorders. Additional topics may include diagnostic classification, the impact of health and stress on psychological functioning, understanding abnormality, and therapies.

Credits: 3.00

PSYCH 270 – Environmental Psychology

Psychological theory is used to explore how the environment affects our daily lives and how we, in turn, shape and influence the environment. Topics may include wayfinding, personal space, learning and work environments, crowding, territoriality, and serious environmental problems. A greater understanding and appreciation of built and natural environments are the primary objectives.

Credits: 3.00

SOCI 210 – Intro to Research Methods

Introduction to Social Research Methods examines the scientific method applied to the understanding of behaviour, the recognition and posing of scientifically researchable questions, and the examination of different research designs. Students gain an understanding of qualitative and quantitative methods in social research. Students are introduced to relevant research questions, issues of interest, and how to communicate knowledge and information about their social world.

Credits: 3.00

SOCI 240 – Indigenous Family Support

This course explores the diverse and unique nature and dynamics of First Nations, Aboriginal, Metis and Inuit (referred to inclusively as Indigenous) families. Students learn directly from Indigenous families, their support networks and advocates their strengths as well as the challenges and struggles they continue to face through the imposed transition from traditional to contemporary family roles. From this, students will work towards fostering a better understanding of how they can assist in providing culturally appropriate family support, and promoting family wellness and safe environments for children.

Credits: 3.00

OR any humanities course, social science course or fine arts course not used to meet other requirements

SCIENCE

BIOL 151 – Biology of the Environment

Biology 151 focuses on environmental and ecological topics within biology from a local perspective. BIOL 151 helps inform students about local and global environmental issues, current events, and new and emerging technologies from a scientific perspective. Students, with the help of their instructor, will design and implement a research project that focuses on a local environmental issue and present it to members of the community.

Credits: 3.00

CHEM 100 – Intro to Environmental Chemistry

This course is an introduction to the fields of environmental studies and environmental chemistry. Qualitative and quantitative aspects of environmental processes are studied. Topics include atmospheric processes (including those involving carbon dioxide and ozone), air pollution, acid rain, natural waters, dissolved oxygen, and the fate of chemical compounds in the environment. Where possible, examples involving local issues and current events are studied.

Credits: 3.00

GEOL 220 – Environmental Geology and Natural Disasters

This course examines the nature of a variety of natural hazards including events such as earthquakes, volcanic eruptions, landslides, river flooding, severe weather, wildfire, and hurricanes. Current methods of analysis, prediction and mitigation are investigated. Laboratory activities concentrate on working from real-life situations in order to draw conclusions about natural hazards issues.

Credits: 3.00

COMP 153 – Intro to Data Processing

This course allows students to develop skills in the operation and applications of professional productivity software for the PC. Students use the four applications of the Microsoft Office 2016 suite: Word, Excel, Access and PowerPoint. The theory component develops a broad and general understanding of current computer technology.

Credits: 3.00

OR any other science course not already used to meet other requirements

OTHER

Any Business Management or Tourism Management or Recreation Management course

See course calendar for course descriptions.